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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,064	05/08/2001	Peter Lisec	L57-362002-pUS	9161

466 7590 05/25/2004

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EXAMINER	
AFTERGUT, JEFF H	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/850,064	LISEC, PETER	
	Examiner	Art Unit	
	Jeff H. Aftergut	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of German Patent 3634793 any one of E.P. 546,854, E.P. 662,389 or PCT WO 88/06966 and any one of Wilkinson (newly cited), United Kingdom 709,824 (newly cited) or Carrow (newly cited) optionally further taken with Lemelson.

The admitted prior art taught that it was known at the time the invention was made to join two tubular profiles together in the construction of a window spacer frame wherein the tubular members were joined in a welding operation. The admitted prior art suggested that during the welding operation a weld bead was formed on the inner surface of the welded tubular members and that this would have been undesirable when making a spacer frame for a window. It should be noted that the optical differences as a result of this process in the window resulted in the undesirability of the weld bead only on the inner surface of the spacer frame. In the admitted prior art, the frame was formed from aluminum. To avoid the same, the applicant herein has provided the profiles with a machined out portion on the edge of the profile in order to better control and/or eliminate the formation of a bead on the exterior of the profile member. The admitted prior art failed to teach that one skilled in the art at the time the invention was made would have incorporated an internal element in the region of the butt weld.

German Patent '793 suggested that one skilled in the art of manufacturing a welded window profile which was butt welded to provide a chamfer of the tubular members being welded wherein one was able to eliminate the formation of a bead in the welded assembly. The abstract of the reference suggested that the profile materials were thermoplastic materials and it failed to make mention of the use of a machining (cutting) operation for forming the chamfer. It should be noted that the admitted prior art suggested that the window frame members being joined would have been known to have been constructed from aluminum and that these aluminum profiles were joined together via butt welding. The problem identified was the formation of the bead. German Patent '793 in a butt welding operation of profiles for a window suggested that the beads be eliminated by providing a chamfer in the profile in the region where the butt weld was to take place so that during the welding operation when the pieces were brought together the plastic material would have flowed into the chamfer and bead would not have been formed. The reference suggested that a slight fillet would have remained in the welded assembly. The reference identified the same problem and suggested an identical solution and thus one would have reasonably expected that processing the aluminum tubes in the same fashion as the plastic profiles of the German Patent would have achieved the same result (the elimination of the bead).

The references to any one of E.P. 546,854, E.P. 662,389 or PCT WO 88/06966 suggested that it was known at the time the invention was made to machine and/or cut a chamfer in the ends of a tube prior to joining the same together in order to eliminate the bead formed on the interior of the so welded tubes. The processes of each reference suggested that the weld beads would have been completely removed in the welding operation. The applicant is referred to E.P.

546,854 at page 3, lines 52-53, for example, E.P. 662,389 at column 4, lines 55-58, for example, or PCT WO 88/06966 at the abstract. Clearly, it was well known at the time the invention was made to incorporate tubular profiles with chamfers which were cut into the tubes (machined) in order to provide one with a tubular profile which was ready for welding wherein the bead formed on the surface would have been eliminated (note that in each of the references to E.P. 546,854, E.P. 662,389 or PCT WO 88/06966 the machining of the tubes was to eliminate the weld bead formed after the welding operation). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the techniques of any one of E.P. 546,854, E.P. 662,389 or PCT WO 88/06966 to machine out the chamfer in the tubular members of German Patent 3634793 wherein the tubular members would have been provided with the chamfers in order to eliminate the weld beads formed in the admitted prior art (wherein the degree of chamfering in the prior art would have effected the amount of weld material available and would have determined whether a minor fillet or no fillet was present in the finished assembly). The combination, nonetheless, failed to teach that one skilled in the art of welding tubular profile members would have incorporated an internal support during the welding operation (note that the claim recites a "stopper element" however since the claim does not require any filling of the hollow metal sections with a material then the term "stopper element" is taken as nothing more that an internal support for the sections being welded together).

In the art of butt welding sections of hollow members together, it was known at the time the invention was made to incorporate an insert within a hollow member during butt edge joining (butt welding) in order to support the hollow members during the welding as well as to avoid an inner weld bead in the hollow members as suggested by any one of Wilkinson, U.K. '824, or

Carrow. More specifically, applicant is referred to column 2, lines 21-40 of Wilkinson wherein the insert 11 was disposed between the tubular members during the joining operation. The reference to U.K. '824 suggested that one skilled in the art at the time the invention was made would have butt welded tubular members together with an insert disposed therein in order to avoid the formation of an internal bead in the finished assembly (note that as the hollow sections of the claim have not been filled with desiccant yet and thus one skilled in the art would have desired a smooth interior surface in order to facilitate the same). Carrow at column 6, lines 16-29 suggested that one skilled in the art at the time the invention was made would have incorporated a plug 7 in order to support thin walled hollow members during the welding operation. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate in insert which was disposed within both open members of the hollow sections to be welded together as such would have adequately supported the joining of thin walled hollow members as well as prevented the formation of an inner bead in the assembly as suggested by any one of Wilkinson, U.K. 709,824, or Carrow in the process of joining the hollow sections together wherein the exterior bead was avoided as suggested by the combination of any one of E.P. 546,854, E.P. 662,389 or PCT WO 88/06966 with German Patent 3634793 and the admitted prior art (wherein the degree of chamfering in the prior art would have effected the amount of weld material available and would have determined whether a minor fillet or no fillet was present in the finished assembly).

While, as addressed above, one would have reasonably expected to have employed the techniques of German Patent 3634793 in the admitted prior art and achieved success whether the profiles utilized were plastic or aluminum, to further evidence that those skilled in the art were

well aware that the techniques suggested by German Patent 3634793 would have been applicable to the aluminum tubes of the admitted prior art, the reference to Lemelson is cited. Lemelson suggested that it was known to use similar techniques for welding the ends of either metal or plastic tubes together (column 1, lines 13-17). Clearly, those skilled in the art of making tubular members would have known at the time the invention was made to incorporate similar techniques when welding the tubes together whether the tubular material was formed from plastic or aluminum. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the techniques of any one of E.P. 546,854, E.P. 662,389 or PCT WO 88/06966 to machine out the chamfer in the tubular members of German Patent 3634793 wherein the tubular members would have been provided with the chamfers in order to eliminate the weld beads formed in the admitted prior art as the welding techniques used to weld plastic tubes together would have been understood to have been useful for welding aluminum tubular members together as well as evidenced by Lemelson and wherein an insert would have been disposed in the region where one was welding the members together as suggested by any one of Wilkinson, U.K. 709,824, or Carrow in order to eliminate interior beads as well as support welding of thin sections.

3. Claims 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 2 further taken with German Patent 4223730 (newly cited).

The references as set forth above suggested that one skilled in the art of manufacturing a hollow profile for a window would have known to incorporate an insert in the assembly in order to facilitate the butt welding operation on thin walled members wherein no interior seam would

have been present. The references failed to teach that those skilled in the art would have known to fill the hollow profile member with hygroscopic material in order to provide for the drying of the space between the windowpanes where the hollow spacer profile was disposed in use. However, it was known in the art of manufacturing a hollow profile for a window to incorporate desiccant into a hollow profile member, bend the same to provide the desired shape and then plug the ends of the profile with a plug member disposed within the end portions of the profile after the filling and bending operations as suggested by German Patent '730. More specifically, applicant is referred to the abstract of disclosure and the insert member 24 which was used to plug the ends of the bent spacer member after one filled the same with desiccant. Note that the plugs 24 appear to become part of the finished assembly in German Patent '730. Clearly, inclusion of a plug and/or stopper at the ends of the hollow sections would have been obvious as such would have prevented the desiccant from escaping subsequent to the filling operation and prior to completing the weld of the sections together. Additionally, the inclusion of desiccant for the hollow profile members would have been obvious to one of ordinary skill in the art as such would have reduced the occurrence of condensation between the panes of glass in the finished window assembly. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate hygroscopic (desiccant) material in the hollow sections of the profiles in order to improve the performance of the finished window assembly wherein the hygroscopic material was added prior to plugging the ends and welding the same together as suggested by German Patent 4223730 in the process of making a finished spacer profile as set forth above in paragraph 2 (wherein the plug would have been left in place to also ensure that the thin profile members were adequately supported in the welding operation).

Response to Amendment

4. The declaration under 37 CFR 1.132 filed 4-12-04 is insufficient to overcome the rejection of claims 14-26 based upon the prior art of record because: the claims at hand are not commensurate in scope with the showing in the declaration. The claims at hand fail to state that there is no bead present after the welding operation in the region where the material was removed when the edges of the ends were contacted with one another. Thus, whether a bead would have been present in the prior art references of not is immaterial. One skilled in the art would have proceeded with the application of pressure until no bead was present whether one employed metal (aluminum) or plastic for the profile members. Additionally, as depicted and described by applicant it is not clear how one can avoid a bead in the region when the edges contact each other. As depicted in Figures 2 and 3 there is metal material disposed between the end of the profile member and the edge where a portion of the material was removed. If the edges 7 were to contact each other, the metal material must go somewhere (conservation of material). It is apparent that this material does not flow inside as applicant has provided the stopper 9 to prevent this flow as expressed in the declaration. Exactly where this material flowed to is not entirely clear, however it would appear that a portion of it must form a slight bead in the region when the edges 7 were contacted as there is no other place for this material to go. As to the prior art, one versed in the art would have been expected to understand how plastic and metals flow and would have been expected to proceed with the butt welding operation to the point that the edges contacted each other (if no bead was to be formed using metal). Additionally, note as expressed above the claims at hand do not exclude the formation of a bead in the processing of the materials.

Declarant argues that the material left in the step region flows to fill the gap left by the removal of the material in the step region and therefore the prior art of record cannot press to the point where the edges 7 touch (the edges 7 of the drawings in the application, see Figure 3). However, it is not clear what declarant has done to prevent the material in the stepped region from flowing outward (and thereby forming a bulge in the region of the joint). Note that the material MUST flow somewhere and it cannot flow inwardly as the stopper 9 is present. For there to be no bulge in applicant's invention it is believed that the progression of the weld must stop prior to the edges 7 touching each other. In any event, pressing to fill the step and provide a smooth exterior region would have been desirable in the prior art and would have been performed. If one needed to press to the point of contact of the edges one skilled in the art would have done the same to eliminate the step and provide a joint which was budge free. One skilled in the art would have determined the degree of pressing through routine experimentation and the amount of pressure applied was a function of the amount of material present in the stepped region.

Response to Arguments

5. Applicant's arguments with respect to claims 14-26 have been considered but are moot in view of the new ground(s) of rejection.

The applicant is advised that the inclusion of a stopper and/or support in the region of the weld of the hollow tubular members would have been obvious to one of ordinary skill in the art at the time the invention was made as such would have supported the welding of thin materials as well as prevented the flow of the material into the interior of the assembly as envisioned by any one of Wilkinson, United Kingdom 709,824 or Carrow. Additionally, the filling of the

hollow sections with the hygroscopic materials prior to the welding operation wherein a plug was disposed in the ends and retained in the ends for the purpose of retaining the hygroscopic material as well as to provide for connecting the ends of the hollow sections together as suggested by German Patent 4223730 (wherein the support would have provided the benefits during welding previously identified).

Regarding the declaration, note as addressed above it is not at all entirely clear where the excess metal material flowed in the pressing operation. Note that the claims at hand do not recite the lack of the bead in the weld region. It should be noted that it is not seen how the flow of the plastic and the flow of the metal would have been different in the welding operation. Additionally, it should be noted that the ordinary artisan would have determined through routine experimentation the degree of pressing to attain a suitable weld and it would have been obvious to one of ordinary skill in the art to press until the surfaces touch as this is what applicant presumably did to avoid a bead formation and the reference suggested no bead formation.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 4,698,891 to Borys suggested that those skilled in the art at the time the invention was made would have incorporated spacers in the filling of a hollow member with hygroscopic materials in order to prevent the hygroscopic materials for spilling out of the hollow spacer in the manufacture of a window. Lisec '954, and Lisec '938 both suggested various means for filling a spacer frame with hygroscopic materials.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
May 18, 2004